

Claims

1. An electrical machine, in particular a direct current motor for vehicles,
having a multi-pole stator which has an annular pole housing (1) and a
plurality of magnets (2) that are located on the inside face of the pole
housing (1), and having a magnet splinter guard (3), which shields the
magnets (2) inward in the radial direction toward the rotor, characterized in
that the magnet splinter guard (3) is formed from a rectangular blank, has
an overlapping region (4), extending in the circumferential direction over the
axial length of the magnet splinter guard (3), and on each of the ends (6, 7)
of the magnet splinter guard (3) located in the axial direction, a respective
centering ring (8) is located, for centering the magnet splinter guard (3).

2. The electrical machine according to claim 1, characterized in that the
magnet splinter guard (3), in the installed state, automatically exerts a
radially outward- oriented prestressing force on the magnets (2).

3. The electrical machine according to one of the foregoing claims,
characterized in that the centering rings (8) each have a tapering region
(19).

4. The electrical machine according to one of the foregoing claims,

characterized in that the centering rings (8) enclose the magnets (2) between the pole housing (1) and the magnet splinter guard (3).

5 5. The electrical machine according to one of the foregoing claims, characterized in that the magnets (2) have a pole lift (10), and the overlapping region (4) of the magnet splinter guard (3) is located on the pole lift (10).

10 6. The electrical machine according to one of the foregoing claims, characterized by a clamping strip (5), which is located on the outer circumference of the magnet splinter guard (3) and in the installed state is located between two magnets (2).

7. The electrical machine according to one of the foregoing claims, characterized in that the axial ends (6, 7) of the magnet splinter guard (3) are slightly bent radially outward.

15 8. The electrical machine according to one of the foregoing claims, characterized in that the magnet splinter guard (3) at the overlapping region (4) has a graduated region (11), so that the magnet splinter guard (3) in the installed state has a constant inside diameter.

9. The electrical machine according to one of the foregoing claims,

characterized in that the magnet splinter guard (3) is joined to the overlapping region (4) in captive fashion.

10. The electrical machine according to one of the foregoing claims, characterized in that the tapering region (9) of the centering rings (8) is embodied as a cone or as an outward-bulging region, or as an inward-bulging region, or as a stepped tapering region.